

Land Use Planning and the Use of the Growth Management Act to Reduce Vehicle Miles Traveled

What is the program?

Local Plan Review and Assistance: The Washington State Department of Transportation (WSDOT) reviews local plans and regulations prepared under the Growth Management Act (GMA) encouraging cities and counties to adopt plans and regulations consistent with state transportation plans and investments.

Regional Transportation Planning: WSDOT supports the activities of Regional Transportation Planning Organizations (RTPOs) which draft regional transportation plans and certify the transportation elements of local plans and policies.

How does the program help reduce vehicle miles traveled (VMT)?

Encouraging local and regional governments to engage in good land use and transportation planning practices has great potential for influencing travel behavior. The characteristics of land use choices (density, mix, regional accessibility, and street connectivity) relate significantly to the characteristics of travel choices (distance, time, and mode choice). A 2005 study of Central Puget Sound,¹ found that land use patterns were highly correlated with trip chaining² patterns and type or mode of travel choice. The study also found that:

- doubling the average intersection density from 48 to 96 intersections per square kilometer was associated with a 19 percent reduction in VMT
- doubling the average level of land use mix from 0.19 to 0.37 (with 0 being single use and 1 being evenly mixed) was associated with a 4 percent reduction in VMT.
- doubling the average residential density from 4.4 to 8.8 units per acre was associated with a 2 percent reduction in vehicle hours traveled (density was not significantly related to VMT)

A 2001 analysis of more than fifty studies found regional accessibility, a measure of the balance of jobs and housing, matters even more for reducing VMT (on a scale of 4:1) than local density, land use mix, or street design.³

What is happening now (current status/activities)?

Local Plan Review and Assistance: WSDOT conducts a minimal level of review of local plans and regulations as to how these may affect the transportation system and how people use the system. WSDOT provides data and technical assistance to local governments to help them meet state planning requirements. We provide guidance to local governments on context sensitive design⁴, urban planning approaches that promote physical activity, and bicycle and pedestrian

¹ Lawrence Frank and Company, Inc., Mark Bradley, and Keith Lawton Associates. "Travel Behavior, Emissions, & Land Use Correlation Analysis in the Central Puget Sound." WSDOT in cooperation with FHWA. July 20, 2005.

² A trip chain is the traveler's practice of linking multiple activities into one trip or "tour."

³ Ewing, Reid and Robert Cervero. "Travel and the Built Environment - A Synthesis," Transportation Research Record, 1780. 2001:111.

⁴ See WSDOT's Context Sensitive Solutions Initiatives briefing paper for more detail. The briefing paper is located on the Transportation Implementation Working Group (IWG) web page: www.ecy.wa.gov/climatechange/2008CATdocs/IWG/tran/6908_css4.pdf

planning⁵ as well as technical and financial support. We are currently developing internal policies and guidance for WSDOT employees reviewing local plans.

Regional Transportation Planning: WSDOT assists the state's 14 regional transportation planning organizations in creating work plans, managing funding, and meeting state objectives. We also coordinate statewide regional transportation planning activities. We are currently developing internal policies and guidance for WSDOT employees who coordinate regional planning activities.

What can we be doing with existing resources to enhance the program's ability to reduce VMT?

WSDOT plans to update our corridor-level planning guidance to improve our consideration of local land use planning and regulation, as well as help inform the public and local officials of the effects of their land use decisions on the transportation system and its use. The guidance is intended primarily for WSDOT planning staff in the Regions and Divisions who conduct corridor-level planning studies, but may be useful as well to local governments and regional transportation planning organizations.

What could we (or should we) be doing with additional resources? (i.e. where are the opportunities for growth/enhancement)?

WSDOT is exploring an array of potential policy actions for strengthening the transportation-land use connection including:

- staffing, training and technical assistance, and monitoring of WSDOT's review of local land use plans and regulations and to better inform the public and local officials about the effects of their decisions on the transportation system and its use
- establishing an internal strategy for integrating transportation and land use, a transportation-efficient land use technical assistance program for local governments (for example: state highways as main streets, active community environments initiative⁶), and a voluntary plan endorsement process linked to grants and other incentive programs
- strengthening the framework for regional transportation planning organizations, adding regional land use planning to their objectives, and providing them with additional tools for promoting transportation-efficient land use practices (for example: planning tips, emerging issue research briefs, modeling assistance, and incentive programs)
- developing a statewide modeling program integrating transportation and land use planning and analysis
- developing and implementing shared grant criteria linked to reducing VMT and related emissions for use by all agencies administering state funding

Program Contact:
Elizabeth Robbins
Manager, Transportation Planning Office
Washington State Department of Transportation
360-705-7371
Robbins@wsdot.wa.gov
www.wsdot.wa.gov/planning

⁵ See WSDOT's Bicycle and Pedestrian Program briefing paper for more detail. The briefing paper is located on the Transportation Implementation Working Group (IWG) web page: www.ecy.wa.gov/climatechange/2008CATdocs/IWG/tran/6908_bpp3.pdf

⁶ See WSDOT's Active Community Environments Initiative briefing paper for more detail. The briefing paper is located on the Transportation Implementation Working Group (IWG) web page: www.ecy.wa.gov/climatechange/2008CATdocs/IWG/tran/060908_tran_ActiveCommunityEnviroInitiative.pdf